

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Adeela Kamal et al.)	Group Art Unit: Not Yet Assigned
Serial Number: 10/538,687)	Examiner: Not Yet Assigned
Filing Date: June 10, 2005)	CONFIRMATION NO: 3645
Title: Cytotoxins and Diagnostic Imaging Agents Comprising HSP90 Ligands)	

Electronically filed on March 29, 2006 by
Ann L. [Signature]
Ann L. [Signature]

Mail Stop IDS
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §1.97

Sir:

Applicants hereby submit an Information Disclosure Statement along with attached forms PTO/SB/08A and B. A copy of each listed publication is being submitted, if required, pursuant to 37 C.F.R. §§1.97-1.98, as indicated below.

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. Applicants further request that the Examiner initial and return the attached forms PTO/SB/08A and B in accordance with MPEP §609.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, prior art or material to patentability as defined in §1.56.

☒ 37 CFR §1.97(b). This Information Disclosure Statement should be considered by the Office because:

- ☐ (1) It is being filed within 3 months of the application filing date of a national application and is other than a continued prosecution application under §1.53(d);
-- OR --
- ☐ (2) It is being filed within 3 months of entry of a national stage as set forth in §1.491 in an international application;
-- OR --
- ☒ (3) It is being filed before the mailing date of the first Office Action on the merits;
-- OR --
- ☐ (4) It is being filed before the mailing of a first Office Action after the filing of a request for continued examination under §1.114.

☐ 37 CFR §1.97(c). Although this Information Disclosure Statement is being filed after the period specified in 37 CFR §1.97(b), above, it is filed before the mailing date of the earlier of (1) a final office action under §1.113, (2) a notice of allowance under §1.311, or (3) an action that otherwise closes prosecution on the merits, this Information Disclosure Statement should be considered because it is accompanied by one of:

- ☐ a certification as specified in §1.97(e) provided concurrently herewith;
-- OR --
- ☐ a fee of \$180.00 as set forth in §1.17(p) authorized below, enclosed, or included with the payment of other papers filed together with this statement.

☐ 37 CFR §1.97(d). Although this Information Disclosure Statement is being filed after the mailing date of the earlier of (1) a final office action under §1.113 or (2) a notice of allowance under §1.311, it is being filed before payment of the issue fee and should be considered because it is accompanied by:

- A. a certification as specified in §1.97(e); and
- B. a fee of \$180.00 as set forth in §1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this Statement.

☐ 37 CFR §1.97(e). A certification signed by an Attorney of Record is provided herewith as required under 37 CFR §§1.97(b) and (c).

☒ 37 CFR §1.98(a)(2). The content of the Information Disclosure Statement is as follows:

- ☐ Copies of each of the references listed on the attached Form PTO/SB/08A are enclosed herewith.
-- OR --
- ☐ Copies of U.S. Patent Documents (issued patents and patent publications) listed on the attached Form PTO/SB/08A are NOT enclosed.
-- AND/OR --
- ☒ Copies of Foreign Patent Documents and/or Non Patent Literature Documents listed on the attached Form PTO/SB/08A are enclosed in accordance with 37 CFR §1.98(a)(2).
- AND/OR --
- ☐ Copies of pending unpublished U.S. patent applications are enclosed in accordance with 37 CFR §1.98(a)(2)(iii).

- ☐ 37 CFR §1.98(a)(3). The Information Disclosure Statement includes non-English patents and/or references.
- ☐ Pursuant to 37 CFR §1.98(a)(3)(i), a concise explanation of the relevance of each patent, publication or other information provided that is not in English is provided herewith.
- ☐ Pursuant to 37 CFR §1.98(a)(3)(ii), a copy of a translation of the non-English language reference(s) is provided herewith
- ☐ Attached are copies of search report(s) from corresponding patent application(s), submitted in accordance with MPEP 609 D in support of the attached certification under 37 CFR §1.97(c)(1).
- ☒ *Fee Authorization.* The Commissioner is hereby authorized to charge the above-referenced fees of \$0.00 and charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 23-2415 (Docket No. 23983-716.832).

Respectfully submitted,

WILSON SONSINI GOODRICH & ROSATI

Dated:

March 21, 2006

By:

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Attorney Docket No. 23983-716.832

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

				Application Number	10/538,687
				Filing Date	June 10, 2005
				First Named Inventor	Adeela Kamal et al.
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	2	of	7	Attorney Docket Number	23983-716.832

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	†2
	17	AUSUBEL et al., <i>Current Protocols in Molecular Biology</i> , John Wiley & Sons, NY 1994	
	18	BAGATELL, R. et al., "Induction of a Heat Shock Factor 1-dependent Stress Response Alters the Cytotoxic Activity of Hsp-90-binding Agents," <i>Clinical Cancer Res.</i> , Aug. 2000, Vol. 6, pp.3312-3318	
	19	BERGE et al., "Pharmaceutical Salts," <i>J. Pharm. Sci.</i> 66:1-19 (1977)	
	20	BOEHM et al., <i>J. Org. Chem.</i> 51:5447-5450 (1986)	
	21	BUCHNER, <i>Trends Biochem. Sci.</i> 24:136-141 (1999)	
	22	BUCHWALD et al., <i>Surgery</i> 88:507 (1980)	
	23	CAILLEAU, R. et al., "Long-term human breast carcinoma cell lines of metastatic origin: preliminary characterization," <i>In Vitro</i> 14:911-915, 1978, PubMed 730202	
	24	CAPLAN, <i>Trends Cell. Biol.</i> 9:262-258 (1999)	
	25	CHIOSIS, G. et al., "A small molecule designed to bind to the adenine nucleotide pocket of Hsp90 causes Her2 degradation and the growth arrest and differentiation of breast cancer cells," <i>Chem. & Biol.</i> 8 (2001) 289-299	
	26	COREY et al., <i>J. Am Chem. Soc.</i> , 96: 5581-5583 (1974)	

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1480, Alexandria, VA 22313-1480.

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Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Complete if Known	
				Application Number	10/538,687
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				First Named Inventor	Adela Kamal et al.
				Art Unit	Not Yet Assigned
				Examiner Name	Not Yet Assigned
Sheet	3	of	7	Attorney Docket Number	23983-716.832

NON PATENT LITERATURE DOCUMENTS			
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	27	CHUMPRADIT, S. et al., "Fluorinated and iodinated dopaminergic agents: D2 imaging agents for PET and SPECT," J. of Med. Chem. 36 (2):221-8 (1993)	
	28	DAI, K. et al., J. Biol. Chem. 271:22030-4 (1996)	
	29	DE LA TORRE-BUENO, J. et al., Modern Pathology 13:221A (2000)	
	30	ERLICHMAN et al., Proc. AACR (2001) 42, Abstract 4474	
	31	ENG et al., Bull. Chim. Soc. Belges 95:895-914 (1986)	
	32	FEDERAL REGISTER 66 (129): 35443-35444	
	33	GOODMAN and GILMAN, <u>The Pharmacological Basis of Therapeutics</u> , current ed., Pergamon Press	
	34	GOODSON, <u>Medical Applications of Controlled Release</u> , Vol. 2, pp. 115-138 (1984)	
	35	GRENET, J.P. et al., J. Biol. Chem. 272:23843-50 (1997)	
	36	HANSON et al., Int. J. Appl. Radiat. Isot. 35:810-812 (1984)	
	37	HARLOW et al., <u>Antibodies: A Laboratory Manual</u> , 2 nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY 1988	
	38	HARTMANN, F. et al., Int. J. Cancer 70:221-9 (1997)	

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	39	HOWARD, G., "Labeling Proteins with Fluorochromes," <i>Methods in Nonradioactive Detection</i> , T. Hward, Ed. Appleton and Lange, Norwalk Conn USA 1993, pp. 39-68			
	40	JALILIAN et al., <i>J. Pharm. Pharmaceut. Sci.</i> 3:114-124 (2000)			
	41	KELLAND, L.R. et al., "DT-Diaphorase Expression and Tumor Cell Sensitivity to 17-Allylaminio, 17-Demethoxygeldanamycin, An Inhibitor of Heat Shock Protein," <i>J. Natl. Cancer Inst.</i> , 17 Nov. 1999, Vol. 91, No. 22, pp.1940-1949			
	42	KUROKAWA, H. et al., <i>Cancer Res.</i> 60:5887-5894 (2000)			
	43	LANGER, <i>Science</i> 249:1527-1533 (1990)			
	44	MANDELKERN et al., "Positron emission tomography in cancer research and treatment," <i>Technologies in Cancer Research and Treatment</i> 1(6):423-39 (2002)			
	45	MARCU, M.G. et al., "The Heat Shock Protein 90 Antagonist Novobiocin Interacts with a Previously Unrecognized ATP-Binding Domain in the Carboxyl Terminus of the Chaperone," <i>J. Biol. Chem.</i> , 24 Nov. 2000, Vol. 274, No. 47, pp.37181-37186			
	46	MILLER, P. et al., <i>Cancer Research</i> 54:2724-2730 (1994)			
	47	MIMNAUGH, E.G. et al., <i>J. Biol. Chem.</i> 271:22796-801 (1996)			
	48	MITCHELL, M.S. and PRESS, M.F., <i>Semin. Oncol. Suppl.</i> 12:108-116 (1999)			

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	49	MUISE-HEIMERICKS et al., J. Biol. Chem. 273:29864-72 (1998)			
	50	NUCLEAR MEDICINE AND BIOLOGY, 20(1), pp.75-77 (1993)			
	51	PANARETOU et al., EMBO J. 17:4829-4836 (1998)			
	52	PRESS, M. et al., Modern Pathology 13:225A (2000)			
	53	PRESTWICH et al., Tetrahedron 40:529-537 (1984)			
	54	PRODROMOU, C. et al., Cell 90:65-75 (1997)			
	55	QUALLS, et al., "Synergistic Phototoxicity of Chloroaluminum Phthalocyanine Tetrasulfonate Delivered via Acid-Labile Diplanmenylcholine-Folate Liposomes," Int. J. of Cancer 93:384-392 (2001)			
	56	REMINGTON PHARMACEUTICAL SCIENCES, current ed., Mack Publishing Co., Easton PA USA			
	57	SAMBROOK et al., Molecular Cloning: A Laboratory Manual, 2 nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY 1989			
	58	SAUDEK et al., N. Eng. J. Med. 321:574 (1989)			
	59	SCHIEBEL et al., PNAS USA 96A:1297-1302 (1999)			
	60	SCHNEIDER et al., PNAS USA 93:14536-41 (1996)			
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	61	SCHULTE et al., Biochem. Biophys. Res. Commun. 239:655-9 (1997)	
	62	SCHULTE et al., J. Biol. Chem. 270:24585-8 (1995)	
	63	SEFTON, CRC Crit. Ref. Biomed. Eng. 14:201 (1987)	
	64	SEGNITZ, B. and GEHRING, U., J. Biol. Chem. 272:18694-18701 (1997)	
	65	SEPP-LORENZINO et al., J. Biol. Chem. 270:16580-16587 (1995)	
	66	SMITH, D.F. et al., Mol. Cell. Biol. 15:6804-12 (1995)	
	67	STEBBINS et al., Cell 89:239-250 (1997)	
	68	STEPANOVA et al., Genes Dev. 10:1491-1502 (1997)	
	69	TREAT et al., <u>Liposomes in the Therapy of Infectious Disease and Cancer</u> , Lopez-Bernstein and Fidler (eds.), Liss, NY USA pp.353-365	
	70	VASILEVSKAYA et al., Cancer Res. 59:3935-40 (1999)	
	71	VOGES, ROLF and PLEISS, ULRICH, eds., <u>Synthesis and Applications of Isotopically Labelled Compounds</u> , Vol. 7. Ulrich Pleiss, John Wiley & Sons Ltd. (2001)	

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	72	WHITESELL et al., PNAS USA 91:8324-8328 (1994)	
	73	ZIMNY et al., "Positron emission tomography scanning in gynecologic and breast cancer," Curr. Op. in Obstetrics and Gynecology 15(1):69-75 (2003)	
	74	RINEHART, JR., K.L. and SHIELD, L.S., "Chemistry of the Ansamycin Antibiotics," <u>Progress in the Chemistry of Organic Natural Products</u> , pp.231-307, 1975	

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